UNITED STATES PATENT AND TRADEMARK OFFICE

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OLIFF & BERRIDGE, PLC.
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER
PAULA, CESAR B

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jarmstrong@oliff.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/064,892
Filing Date: August 27, 2002
Appellant(s): BREUEL ET AL.

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Daniel A. Tanner III
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/5/2008 appealing from the Office action

mailed 11/1/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

7028258	THACKER	4-2006
6895552	BALABANOVIC	5-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1.   Claims 1, 3-13, 16, and 18-28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Thacker et al (USPat.# 7028258 B1, 4/2006, filed on 10/1999), in

view of Balabanovic et al (USPat. 6895552 B1, 5/2005, filed on 5/31/2000).

Regarding independent claim 1, Thacker discloses dividing a document, which is an

electronic version of a paper document (col.3, lines 59-67, and col.5, lines 56-64). Thacker fails

to explicitly teach *deconstructing a document in a page image format into a set of segmented*

image elements, synthesizing the deconstructed document into an intermediate data structure.

However, Balabanovic teaches a well-known technique of decomposing a scanned bitmapped

image into blocks(col.5, lines 50-67). It would have been obvious to one of ordinary skill in the

art at the time of the invention to deconstruct a scanned document, and ocr it to convert it into

text that can be used to pour the document into slots that fit the screen size of the device to

display the document, because of all the reasons found in Thacker including optimizing an

electronic version of a paper document for display in different devices (col.2, lines 11-19). This

would provide the flexibility needed to display the electronic version of the paper document to

accommodate it to the size of the screen.

Furthermore, Thacker shows the pagination of the document by pouring the text

into slots so as to fit, and display on the fly the document on the screen of the device—

distilling the intermediate data structure for redisplay by converting the intermediate

data structure into a format usable for reflow on an arbitrarily sized display structure,

wherein the intermediate data structure is automatically adaptable at the time of display

to constraints of any display device or circumstance of viewing (col.2, lines 1-19, col.5,

lines 50-col.6, line 30).

Regarding claim 3, which depends on claim 2, Thacker discloses dividing a document,

which is an electronic version of a paper document (col.3, lines 59-67, and col.5, lines 56-64)--

logical segmentation of data. Thacker fails to explicitly teach *physical segmentation of data.*

However, Balabanovic teaches a well-known technique of decomposing a scanned bitmapped

image into blocks (col.5, lines 50-67). It would have been obvious to one of ordinary skill in the

art at the time of the invention to deconstruct a scanned document, and ocr it to convert it into

text that can be used to pour the document into slots that fit the screen size of the device to

display the document, because of all the reasons found in Thacker including optimizing an

electronic version of a paper document for display in different devices (col.2, lines 11-19). This

would provide the flexibility needed to display the electronic version of the paper document to

accommodate it to the size of the screen.

Regarding claim 4, which depends on claim 1, Thacker discloses dividing a document, which is an electronic version of a paper document (col.3, lines 59-67, and col.5, lines 56-64). Thacker fails to explicitly teach *the image elements comprises at least one of blocks, lines...* However, Balabanovic teaches a well-known technique of decomposing a scanned bitmapped image into blocks(col.5, lines 50-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to deconstruct a scanned document, and ocr it to convert it into text that can be used to pour the document into slots that fit the screen size of the device to display the document, because of all the reasons found in Thacker including optimizing an electronic version of a paper document for display in different devices (col.2, lines 11-19). This would provide the flexibility needed to display the electronic version of the paper document to accommodate it to the size of the screen.

Regarding claim 5, which depends on claim 1, Thacker discloses dividing a document, which is an electronic version of a paper document (col.3, lines 59-67, and col.5, lines 56-64). Thacker fails to explicitly teach *converting non-text image areas, Layout properties and segmented image areas into the intermediate data structure.* However, Balabanovic teaches a well-known technique of decomposing a scanned bitmapped image into blocks to perform layout of both character and pictures(col.5, lines 50-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to deconstruct a scanned document, and convert it into layout format that can be used to pour the document into slots that fit the screen size of the device to display the document, because of all the reasons found in Thacker including optimizing an electronic version of a paper document for display in different devices (col.2, lines 11-19).

This would provide the flexibility needed to display the electronic version of the paper document to accommodate it to the size of the screen.

Regarding claim 6, which depends on claim 1, Thacker discloses dividing a document, which is an electronic version of a paper document (col.5, lines 56-64). Thacker fails to explicitly teach *synthesizing the set of segmented image elements into an intermediate data structure includes integrating at least one of bitmapped images in an intelligible display layout and links to non-textual elements*. Balabanovic teaches a well-known technique of decomposing a scanned bitmapped image into blocks to perform layout of both character and pictures(col.5, lines 50-67). However, it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the scanned text, and images to, and intelligible layout, and to link the images' locations to the webpage using a well-known markup language, because of all the reasons found in Thacker including optimizing an electronic version of a paper document for display in different devices (col.2, lines 11-19). This would provide the flexibility needed to display the electronic version of the paper document to accommodate it to the size of the screen.

Regarding claim 7, which depends on claim 6, Thacker discloses dividing a document, which is an electronic version of a paper document (col.5, lines 56-64) -- *images of words in reading order.* Thacker fails to explicitly teach *the bitmapped images.* Balabanovic teaches a well-known technique of decomposing a scanned

bitmapped image into blocks to perform layout of both character and pictures(col.5, lines 50-67). However, it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the scanned text, and images to, and intelligible layout, and to link the images' locations to the webpage using a well-known markup language, because of all the reasons found in Thacker including optimizing an electronic version of a paper document for display in different devices (col.2, lines 11-19). This would provide the flexibility needed to display the electronic version of the paper document to accommodate it to the size of the screen.

Regarding claim 8, which depends on claim 1, Thacker shows the pagination in memory of the document by pouring the text into slots so as to fit, and display on the fly the document on the screen of the device (col.2, lines 1-19, col. 4, lines 42-51, col.5, lines 50-col.6, line 30).

Regarding claim 9, which depends on claim 1, Thacker shows the pagination of the document by pouring the text into slots so as to fit in complete words, and display on the fly the document on the screen of the device (col.2, lines 1-19, col.5, lines 50-col.6, line 30).

Regarding claim 10, which depends on claim 1, Thacker shows the pagination, and display of the document, such as magazines, webpages, etc—*Internet browsable format* --, which is a version of a paper document (col.3, lines 59-67, col.4, lines 32-67).

Regarding claim 11, which depends on claim 1, Thacker shows the repagination

of the document by pouring the text into slots so as to fit, and display on the fly the

document on the screen of a specific device (col.2, lines 1-19, col.5, lines 50-col.6, line

30).

Regarding claim 12, which depends on claim 1, Thacker shows the pagination of

the document by pouring the text into slots so as to fit, and display on the fly the

document on the screen of a specific device (col.2, lines 1-19, col.5, lines 50-col.6, line

30).

Regarding claim 13, which depends on claim 1, Thacker shows the repagination

of the document by pouring the text into slots so as to fit, and display on the fly the

document on the screen of the device (col.2, lines 1-19, col.5, lines 50-col.6, line 30).

Regarding claim 16, limitations *an input/output device……a distilling circuit…*are

directed towards a computer system for implementing the steps found in claims 1, and therefore

are similarly rejected.

Moreover, Thacker fails to explicitly disclose— *deconstruct the document into*

image areas, and segmented image elements, synthesizes the non-text image areas,

the layout properties, and the set of segmented image elements into an intermediate

data structure-- (col.2, lines 35-64, fig.2). Balabanovic teaches a well-known technique

of decomposing a scanned bitmapped image into blocks to perform layout of both

character and pictures(col.5, lines 50-67). However, it would have been obvious to one

of ordinary skill in the art at the time of the invention to convert the scanned text, and

images to, and intelligible layout of the document, because of all the reasons found in

Thacker including optimizing an electronic version of a paper document for display in

different devices (col.2, lines 11-19). This would provide the flexibility needed to display

the electronic version of the paper document to accommodate it to the size of the

screen.

Furthermore, Thacker shows the repagination of the document by pouring the text into

slots so as to fit, and display on the fly the document on the screen of the device (col.2, lines 1-

19, col.5, lines 50-col.6, line 30)—*distilling the intermediate data structure for redisplay in a

format usable for an arbitrarily sized display structure.*

Claims 18-20, and 22-25 are directed towards a computer system for implementing the

steps found in claims 3, 6-7, and 10-13 respectively, and therefore are similarly rejected.

Regarding claim 21, which depends on claim 16, Thacker shows the repagination

in memory of the document by pouring the text into slots so as to fit—*distilled

document*--, and display on the fly the document on the screen of the device (col.2, lines

1-19, col.4, lines 41-67, col.5, lines 50-col.6, line 30).

Regarding claim 26, which depends on claim 16, Thacker shows the repagination

of the document by pouring the text into slots so as to fit, and display on the fly the

document on the screen of the device (col.2, lines 1-19, col.5, lines 50-col.6, line 30)--
the distilling circuit, routine or application converts the marked *format into at least one of*
an electronic book format, an Internet browsable format that can accept images and a
print format. Thacker fails to explicitly teach *the deconstructing circuit, routine or*
application analyzes page layout and converts a sequence of page images into a
sequence of document element images captured in a tagged format; Balabanovic
teaches a well-known technique of decomposing a scanned bitmapped image into
blocks to perform layout of both character and pictures(col.5, lines 50-67). However, it
would have been obvious to one of ordinary skill in the art at the time of the invention to
convert the scanned text, and images to, and intelligible layout, and to link the images'
locations to the webpage using a well-known markup language, because of all the
reasons found in Thacker including optimizing an electronic version of a paper
document for display in different devices (col.2, lines 11-19). This would provide the
flexibility needed to display the electronic version of the paper document to
accommodate it to the size of the screen.

Regarding claim 27, which depends on claim 16, Thacker shows the repagination
of the document by sequentially pouring the text into slots so as to fit, and display on the
fly the document on the screen of the device (col.2, lines 1-19, col.5, lines 50-col.6, line
30)-- *wherein the format preserves at least one of reading order and logical page layout*
properties. Thacker fails to explicitly teach *wherein the tagged format;* Balabanovic
teaches a well-known technique of decomposing a scanned bitmapped image into

blocks to perform layout of both character and pictures(col.5, lines 50-67). However, it would have been obvious to one of ordinary skill in the art at the time of the invention to convert the scanned text, and images to, and intelligible layout, and to link the images' locations to the webpage using a well-known markup language, because of all the reasons found in Thacker including optimizing an electronic version of a paper document for display in different devices (col.2, lines 11-19). This would provide the flexibility needed to display the electronic version of the paper document to accommodate it to the size of the screen.

   Regarding claim 28, which depends on claim 26, Thacker shows the repagination—*segmentation algorithm* -- of the document, and pouring out the text into slots, by determining whether the words or elements fit on a line, so as to fit— *background structure analyzer-*, and display on the fly the document on the screen of the device (col.2, lines 1-19, col.5, lines 50-col.6, line 30.

(10) Response to Argument

Regarding independent claims 1, and 16, the Appellant argues that Thacker does not layout or render each page, but rather determine the page breaks within a segment, or there's no motivation to combine Thacker and Balabanovic, and that the modification would alter Thacker in such a way as to unnecessarily complicate the invention, and render it inoperable (page 9, spec. parag. 1, page 10, spec. parag.1, pages 11-12).

The Examiner disagrees, <u>Thacker doesn't just teach finding page breaks, but also pouring or laying out a document(electronic version of a paper document) text into slots created within the document according to the size of the screen of device to display the document. Thacker also teaches the hyphenation of words that don't fit the slots (col.5, lines 56-col.6, line 30, col.3, lines 53-66, fig.).</u>

In response to Appellant's argument that there is no suggestion to combine the references, the Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Appellant states that there is no evidence to support the conclusion that one of ordinary skill in the art would have combined Thacker, and Balabanovic (pages 12-14). The Examiner disagrees, Thacker doesn't teach the deconstruction of the document in an image

format, and the synthesizing of the document into an intermediate structure. However,

Balabanovic teaches decomposing an image of a scanned document by creating a

bitmap--*deconstructing*, and then OCRing the document and breaking up the bitmap

into blocks of text--*intermediate structure*(col.5, lines 50-62). It would have been obvious

to combine the scanning and ocring of the hard copy document of Balabanovic with the

reflowing of text shown by Thacker, because it would make it more flexible, and easier

to adapt the hard copy document text to fit in a particular device screen area size. This

would also cause the scanned in hard copy document to be placed in a format that

would lend itself to the pouring being performed by Thacker, thereby effectively and

quickly reformatting the document to fit in the device's screen.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the

Related Appeals and Interferences section of this examiner's answer.

Conclusion

For all of the reasons stated above the Examiner believes that the rejections

should be sustained.

Respectfully submitted,

/CESAR B PAULA/
Primary Examiner, Art Unit 2178

October 21, 2008

Stephen Hong, SPE 2178
SH(conf.)

/Stephen S. Hong/
Supervisory Patent Examiner, Art Unit 2178

Doug Hutton, SPE 2100
DH(conf.)

/Doug Hutton/
Doug Hutton
Supervisory Primary Examiner
Technology Center 2100